INTRODUCTION

Ayurveda is science that imparts all knowledge of life. It benefits health and factors responsible for its maintenance and promotion. It is the science which did not start with fundamental understanding but developed from observation of phenomenon which was then classified, analyzed and systematized. One of such science is the science of life ‘Ayurveda’. Health is essential for enjoyment of all the worldly pleasures in a righteous manner. Ayurveda provides knowledge which is beneficial to life; in short it discusses all aspects of human life. Ayurveda is everlasting supreme science of medicine because it deals with every aspects of life.

The Vata which is the motivator and controller of other two Dosha, is responsible for manifestation of almost all diseases. Vataja nanatmaja vikaras are eighty in various classics. Major neurological problems come under Vata vyadhis. Kampavata is one of them.

“Na kampo vayuna vina.”

Kampavata is slow progressive disorder of late adult life and is one of the most prevalent and common neurological disorder with more or less equal frequency in all countries around the world. Nearly two centuries have elapsed since disease is known but better treatment is still being sought.

Vyutpatti and Paribhasha

Kampa:-The word Kampa is derived from the root Kapi and suffixed by Ghan which gives the meaning ‘to move’ or ‘to shake’. Gatradi chalanam² means shaking or movement in the body. The word Kampa conveys the meaning of shaking or tremor. Vata:-The term Vata is derived from root Va and suffixed by Ktha³ “Va-gatigandhanayaho”⁴. Vata is one of the three humours of body. Gati

CRITICAL ANALYSIS OF KAMPAVATA (PARKINSONISM)

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ABSTRACT

According to Ayurveda, most of the diseases of Vata are essentially the conditions of degenerative diseases of the nervous system. As many as 80 kinds of Vata diseases are described in Samhitas. The syndrome of Parkinsonism is commonly compared with Kampavata. The syndrome was comprehensively described by James Parkinson in 1817, but the review of much early literature would show that syndrome strikingly similar to Parkinsonism was already known and was categorized among Vata diseases in Ayurveda. Parkinsonism is prevalent all over the world and has no definitive treatment in conventional medicine except for the palliative prescription of anticholinergics together with levodopa and dopadecarboxylase inhibitor. The Ayurvedic treatment strategy is to combat Vata dosha and to sustain neuronutrition by Rasayana remedies. This article discusses Vata diseases as a class with emphasis on Ayurvedic therapies of Parkinsonism.

Key words: Kampavata, Parkinsonism, Rasayana, Vata dosha, Anticholinergics.
and Gandhana are the two important functions of Vata. All the motor and sensory functions in the body are governed by Vata. The word Kampavata means the disorder of impaired Vata, in which the prime clinical manifestation is Kampa. Definition of Parkinsonism:-Marselen (1994) has defined Parkinsonism disease as “a clinical syndrome dominated by a disorder of movement consisting of tremor at rest, rigidity, elements of bradykinesia, postural and gait abnormalities associated with a distinctive pathology consisting of degeneration of pigmented brainstem nuclei including the dopaminergic substantia nigra, pars compacta with the presence of lewy bodies.5

**REVIEW OF LITERATURE**

Charaka:-In Charaka Samhita kampavata is found by the name Vepathu and has been included in the Vata nanatmaja vikaras.6

Sushruta:-Sushruta has mentioned the symptoms like Chestasanga, Sthamba and Gurugatrata in the condition of Kaphavrita vyana vayu.7 Kampa have been mentioned as the Upadraya of Prameha.8 Vepathu is described as symptom in Shhvara visha vignyana.9

Kashyapa:-Vepathu has been mentioned under the Vata nanatmaja vikaras.10 Sharangadharana:-He has mentioned Kampa under Vataja roga.11 He explained Shira kampa under Shiroroga.12 Bhavaprakash:-Acharaya Bhavanishra has explained symptoms of Sthamba and Kampa in condition of Snayugata vata.13 He explained even excessive use of Tikta rasa will lead to Kampa.14 Yogaratnkar:-He has explained Sarvanga kampa and Shirokampa under disease vepathu in vata vyadh.15 Ashtanga sangrah and Ashtanga hridaya:-Kampa is described as a symptom of Prakupita vata.16 Kampa is also described as a symptom of Sarvanga vata.17 Even Kampa is mentioned in Kapha kshaya, Pitta kapha kshaya and Rasa kshaya conditions.18

Vangasena:-He explained vepathu as sarvanga kampa under vata vyadhi.19

**Nidana (Causative Factors)**

“Vyadhi utpatti hetu nidanam”.20 Nidana refers to all the causative factors which are responsible for the initiation and progress of the disease process. Treatment becomes easier by knowing the causative factors of a disease. ‘Nidana parivarjana’ is one type of Chikitsa which is mentioned in our classics. According to Ayurveda consideration of aetiological factors is important for diagnosis, prognosis and line of treatment.

Ayurveda adopts a holistic approach to the understanding of whole body physiology by explaining the body functions in terms of three bio factors called Tridosha (vata, pitta, kapha). In all applied considerations, the Vata system of Tridosha represents neuroscience in Ayurveda. The Vata dosha is responsible for entire neurophysiological phenomena operating the body. When any one takes Vataja ahara –vihara in excess amount, Vata gets vitiated. When the Vata dosha loses its equilibrium due to a wide range of aetiological factors, including tissue degeneration and damage (dhatu kshaya) and neuro obstructive diathesis (margavaran), it leads to the development of 80 types of Vata diseases or neurological diseases.

The aetiopathogenesis of Parkinsonism is not precisely known in conventional medicine. Combinations of several factors are involved in development of Parkinsonism. These factors include free radicals, accelerated aging, environmental toxins and genetic predisposition. Specific aetiology of Parkinsonism is related to aging and it develops in people over 50 years.
old. Exposure to environmental chemicals may cause damage to basal ganglia and brain stem.

**Samprapti (Pathology)**

*Samprapti* means the complete procedure of manifestation of disease. In *Ayurveda*, no specific structural pathology of *Kampavata* is described other than its identification as a *Vata dosha* disease. The *Vata* diseases as described in *Ayurvedic* classics include a wide range of neurological morbidities, including inflammatory, degenerative, obstructive and functional. The *Vata* diseases may manifest as *Vata vridhi* (hyper functioning), *Vata kshaya* (hypo functioning) or *Avarana* (masked functioning). The *Samprapti* of *Vata* disease can be explained by this way-

<table>
<thead>
<tr>
<th>Intake of <em>Vata</em> vitiating <em>Ahara</em> and <em>Vihara</em></th>
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</thead>
<tbody>
<tr>
<td>Vitiating <em>vata</em> travels in the body through <em>srotas</em></td>
</tr>
<tr>
<td>Settles in <em>riytha sthana</em></td>
</tr>
<tr>
<td><em>Vata vyadhi</em></td>
</tr>
</tbody>
</table>

**Samprapti Ghatak**

*Dosha* - *Vata*

*Dushya* - *All Dhatus*

*Adhishthan* - *Anga, Pratyanga, Sarvanga, Koshtha, Kandara, Sira, Snayu*

*Srotas* - *Vatavaha srotas*

*Srotodushti prakar* - *Sanga, Vimarga gaman*

*Agni* - *Vishmagni*

*Vyadhi swabhava* - *Naveen - Mradu*

*Jirna* - *Daruna*

*Sadhya* - *Naveen - Sadhya / Krichrasadhya*

*Jirna* – *Yapya / Asadhya*

In conventional medicine, Parkinsonism is described as a chronic progressive disease of extrapyramidal system of the brain where voluntary movements are disturbed with the appearance of involuntary movements and altered muscle tone. The pathology of Parkinsonism essentially involves a loss of dopaminergic neurons in the substantia nigra. The major symptoms are related to deficiency of dopamine. Dopamine is an inhibitory transmitter in basal ganglia. It is one of the three catecholamine neurotransmitters. It is caused by lesions in basal ganglia and is especially associated with damage to the interconnecting system between substantia nigra and corpus stratum.

**Roopa (Clinical features)**

Many diseases are included under *Vata vyadhi*. They can be listed under these headings:

1. *Vata vyadhi* due to *Avarana*
2. *Ekanga vata vyadhi* (localised)
3. *Sarvanga vata vyadhi* (generalised)
4. *Koshtha gata vata vyadhi*
5. *Dhatu gata vata vyadhi*

*Kampavata* can be taken as *Ekanga* or *Sarvanga vata vyadhi*. 
Clinical features of Kampavata in Ayurveda are similar to those described for Parkinsonism. The four main features are -

- Bradykinesia (abnormal slowness of voluntary movements, often with diminution of range of movements)
- Muscular rigidity (cog-wheel rigidity).
- Resting tremors (it is a pronation-supination tremor that is described as "pill-rolling," that is the index finger of the hand tends to get into contact with the thumb and perform a circular movement together).
- Postural imbalance (leading to disturbance of gait and falling).

Other symptoms are hypophonic dysarthria, monotonous speech pattern, shuffling gait with short steps, decreased automatic movements, arm swing, masked face, dementia depression, constipation, urinary hesitancy, micrographia and orthostatic hypotension.

Sadhyata (Prognosis)

In Ayurveda, the prognosis of Parkinsonism is not specifically given. Most Vata diseases are not curable but the patient may be able to live with the diseases curtain degree of inconvenience and difficulties. As the disease progresses, patients develop rigidity and cannot take care of themselves. In extreme cases, death may occur from the patient’s inability to breathe, resulting in aspiration pneumonia or pulmonary embolism. Ayurvedic therapies available can make life much easier and increase life expectancy. Treatment with pharmacological agents or direct electrical stimulation of target areas (thalamus, subthalamic nucleus and globus pallidum) can provide relief in symptoms, good functional mobility for many years and a substantial increase in life expectancy.

Chikitsa (Treatment)

In Ayurveda Aushadha is considered as one of the four fold constituents of Chikitsa chatushpada. Kampavata being one of Vata vyadhi general line of treatment can be explained here. For better understanding these principles of treatment are explained under three headings:

1 Shodhana Chikitsa:- Following procedures are done under Shodhana for Kampavata-
   - Snehana Karma
   - Abhyanga
   - Swedana Karma
   - Virachana Karma
   - Nasya Karma
   - Basti Karma

2 Shaman Chikitsa:- Following drugs are mentioned in different classics for treatment of Kampavata-
   - Nakula taila (Bhaishajya ratnavali)
   - Nakuladhya ghrita (Bhaishajya ratnavali)
   - Brihat Chagaladi ghrita (Bhaishajya ratnavali)
   - Maha narayana taila (Bhaishajya ratnavali)
   - Triguna rasa (Sahasra Yoga)
   - Sahacharadi taila (Sahasra Yoga)
   - Rasna taila (Bhela Samhita)
   - Ksheerabala taila (Ashtanga Hridaya)
   - Varuni taila (Sharangadhara Samhita)
   - Dhatturadi taila (Sharangadhara Samhita)
   - Mashadi taila (Sharangadhara Samhita)
   - Maharasnadi kwath (Sharangadhara Samhita)
   - Devalarvadi kwath (Sharangadhara Samhita)
   - Sarvaga kampa rasa (Rasa Ratnakar)
   - Nakula taila (Harita Samhita)
   - Mash taila (Vangasena)
   - Maha masha taila (Chakradatta)
Vishagarbha taila (Yogaratnakar)

Other measures:
- Exercise: Exercise increases the patients overall health and functionality.
- Nutrition or Diet: Patient should be instructed to eat healthy diet. According to Ayurveda Madhura, amla and lavana rasa are Pathya in Kampavata.
- Yoga and Meditation: They help to build resistance and immunity in the body. They also help in regulation and balance functioning of nervous system. Ayurvedic philosophy teaches us that the individual with a purely sattvik nature does not experience disease. Likewise, one who is sick, cultivates a sattvik mind brings rapid healing to their body. Hence all patients should be encouraged to reduce stress and cultivates practices such as meditation which bring peace of mind.

Being a neurodegenerative disease, Parkinsonism is treated by Rasayana or rejuvenative approach in Ayurveda. Rasayana drugs are essentially nutraceutical agents and Medhya rasayana are specific neuronutrients or nerve tonics with nootropic effect. Ashwagandhha (Withania somnifera), Brahmi (Bacopa monnieri), Mandukparni (Centella asiatica) and Bala (Cida cordifolia) are the common classical drugs advocated for this purpose. This is because Ayurveda considers such movement disorders under vata dosha and to sustain neuronutrition by rasayana remedies. Kapikachhu (Mucuna pruriens) an edible legume and popular Ayurvedic aphrodisiac has also been used for treating Kampavata. With the recent discovery that Mucuna pruriens seeds are highly rich source of levadopa, the use of Kapikachhu in Kampavata has tremendously increased. Kapikachhu has been traditionally used for treating tremor disorders in Ayurveda.

In conventional medicine, the treatment is primarily based on increasing the levels of dopamine. Carbidopa and levodopa, dopamine receptor agonists and monoamino oxidase inhibitor are used to maintain the levels of dopamine. The pharmacological treatment are only symptomatic, they do not change the progression of the disease. If used skilfully, these drugs may dramatically improve the quality of life and functional ability. Another treatment option is surgery. The main surgical approach commonly used is pallidotomy (incision or partial destruction of globus pallidum) and high frequency deep brain stimulation with an electrode implanted in one of these target areas- thalamus, subthalamic nucleus and globus pallidum. These procedures are effective in providing relief from major symptoms and improving the quality of life but do not alter the course of the disease.

**DISCUSSION AND CONCLUSION**

- **Kampa** is a cardinal symptom of Kampavata. Increased movements are denoted as Vepathu, Spandana, Sphurana etc. as mentioned in Ayurvedic texts. Vepathu or Kampa is enumerated in Vata nanatmaja vikaras.
- **Kampavata** is a slow progressive disorder of late adult life and is one of the most prevalent neurological disorders.
- **Ayurveda** takes a unique approach to the management of above mentioned neuropathies with a special emphasis on eliminating their cause by Panchkarma, physiotherapy and medicinal treatment with help of a wide range of herbal and herbomineral drugs.
- **Panchkarma** therapy is especially advocated in the treatment of neurological diseases. Different type of Snehana, Swedana are efficacious. Besides special treatment like Shirobasti,
**Shirodhara** and **Basti** therapy are indicated in such diseases.

- **Ayurveda** describes a large number of nootropic drugs (stimulating to mental activity) and nervous system tonics (*rasayanas*). With all these Ayurvedic medicines claim good success in practice of neuromedicine.

- The levodopa content of *Mucuna pruriens* appears to be the basis for the therapeutic effect.

- Levodopa is the precursor of dopamine. Levodopa crosses the blood brain barrier so it is used to increase the dopamine concentration in treatment of Parkinson’s disease.

- Levodopa effects rigidity, slowness, tremors, balance, gait but does not affect the problems related with involuntary functions.

- Levodopa does not slow the disease process but it improves muscle movement and delays severe disability.

- *Mucuna pruriens* endogenously accumulates 1-dihydroxyphenylalanine in range between 0.2 to 2.0% on a dry body weight basis in tissue culture.²⁶

- In a clinical trial, HP-200 made from *Mucuna pruriens* was found to be an effective treatment for patients suffering from Parkinsonism.²⁷

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